

Amendments to the Claims:

This listing will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

Claim 1 (Currently amended): A method for directly separating and purifying polyhydroxyalkanoates in cells from a bacterial fermentation liquid, which comprises the steps of:
comprisings:

- (1) a) physically pretreating of the a fermentation liquid containing cells to cause the walls of the cells with physical method to break; cell wall;
- (2) b) adjusting the pH value of the pretreated fermentation liquid from step a) to alkaline; an alkaline condition;
- (3) c) adding anionic surfactant and reacting under to the solution of step b) and subjecting the solution to agitation;
- (4) d) separating and extracting coagulated precipitate from the solution in step c); and reaction liquid;
- (5) e) washing and drying; drying the coagulated precipitate,

~~Wherein~~ wherein the physical method ~~pretreatment~~ includes ~~mechanical~~ mechanically breaking the cell walls or ultrasonically breaking the cell walls, and wherein steps b) and c) are ~~and~~ ultrasonic breaking; the mechanical breaking includes ball milling or high pressure homogenization; the sequence of adjusting pH and adding surfactant is interchangeable.

Claim 2 (Currently amended): The method according to claim 1, claim1, wherein a coagulating agent ~~can be~~ is added in the step c). (3).

Claim 3 (Currently amended): The method according to claim 1, claim1, wherein the physical pretreatment comprises mechanically ~~mechanical~~ breaking the cell walls using is ball milling.

Claim 4 (Currently amended): The method according to claim 1, claim1, wherein the pH is adjusted in step b) of the pretreated fermentation liquid is adjusted to 8-13.

Claim 5 (Currently amended): The method according to claim 1, claim1 or 4, wherein ~~the alkaline substance used to adjust pH is~~ the pH is adjusted in step b) by adding at least one of NaOH, Na₂CO₃, NaHCO₃ solid/aqueous solution or ammonia to the pretreated fermentation liquid. ~~water.~~

Claim 6 (Currently amended): The method according to claim 1, claim1, wherein the anionic surfactant added in step c) is at least one of olefin sulfonate, fatty alcohol sulfate, fatty alcohol polyoxyethylene ether sulfate, fatty alcohol polyoxyethylene ether or alkylphenol polyoxyethylene ether. ~~ether, its quantity is 0.5-20% (W/V) of the fermentation liquid.~~

Claim 7 (Currently amended): The method according to claim 2, claim1, wherein the coagulating agent ~~is selected from~~ comprises at least one of sodium polyacrylate, modified starch or polyamine. ~~polyamine, its quantity is 0.5-20% (W/V) of the fermentation liquid.~~

Claim 8 (Currently amended): The method according to claim 1, claim1, wherein in step c) the reaction temperature of the solution is adjusted to 10 - 70°C. ~~under agitation is 10-70°C, the time is 5-60min.~~

Claim 9 (Currently amended): The method according to claim 1, claim1, wherein in step d) the method for separating and extracting coagulated precipitate is separated and extracted by means of a ~~from reaction liquid is selected from~~ centrifuge, filter press or vacuum suction filtration.

Claim 10 (New): The method according to claim 1, claim1, wherein the physical pretreatment comprises high pressure homogenization.

Claim 11 (New): The method according to claim 4, wherein the pH is adjusted in step b) by adding at least one of NaOH, Na₂CO₃, NaHCO₃ or ammonia to the pretreated fermentation liquid.

Claim 12 (New): The method according to claim 6, wherein the amount of anionic surfactant added in step c) is 0.5-20% (W/V) of the fermentation liquid.

Claim 13 (New): The method according to claim 7, wherein the amount of coagulating agent added is 0.5-20% (W/V) of the fermentation liquid.

Claim 14 (New): The method according to claim 1, wherein in step c) the solution is subjected to agitation for 5 - 60 min.

Claim 15 (New): The method according to claim 8, wherein in step c) the solution is subjected to agitation for 5 - 60 min.

Claim 16 (New): The method according to claim 5, wherein the NaOH, Na₂CO₃, NaHCO₃ is added as a solid.

Claim 17 (New): The method according to claim 5, wherein the NaOH, Na₂CO₃, NaHCO₃ is added as a solution.

Claim 18 (New): The method according to claim 5, wherein the ammonia comprises ammonia water.